



RF-LAMBDA

The power beyond expectations

Model No: RFAS8810
8 IN 8 OUT
Programmable Attenuator Subsystem





RF-LAMBDA

The power beyond expectations

CONTENTS

FEATURES	3
SIGNAL DIAGRAM	5
SPECIFICATIONS	6
LOCAL CONTROL.....	7
1. Power On.....	7
2. IP Address Setting	8
3. Remote / Local Setting	8
4. Single-channel Attenuation Setting	9
5. Multiple-channel Attenuation Setting	11
6. All-Channel Attenuation Setting	12
7. IP Address Change.....	13
REMOTE CONTROL.....	14
1. Port Configuration Software Installation	14
2. Port Configuration Software Setting	17
3. Operating Software Installation	22
4. Using the Software.....	24
CUSTOM SCRIPT SETTINGS	36
ACCESSORIES.....	37
Ethernet and RS-232 Command Information.....	38



RF-LAMBDA

The power beyond expectations

FEATURES

1. The RFAS8810 is a programmable, eight-channel test subsystem, with a frequency range of 0.8 to 3 GHz and an attenuation range of 0 to 110 dB.
2. The unit runs on the Windows operating system, and is controlled through an RJ45 Ethernet interface by TCP/IP protocol. In order to control the attenuation of each channel, accessible by RS232 serial communication, users can write PC control programs in VBScript, under the RS232 serial communication protocol.
3. The programmable test subsystem can simplify test setups, such as handover, variable handover, and fade attenuator. Its most common use is in wireless communication signal tests, in the standard 19-inch rack package, with high accuracy and stability. In addition to adjusting the unit remotely through LAN, RS-232, or USB interface, you can also easily adjust it in local manual mode. With a large LCD display, keyboard, and knob, the sub-system also has the capability of sending and receiving RS-232 and/or Ethernet commands that you can format to meet your specific command requirements.



RF-LAMBDA

The power beyond expectations

4. Panel view

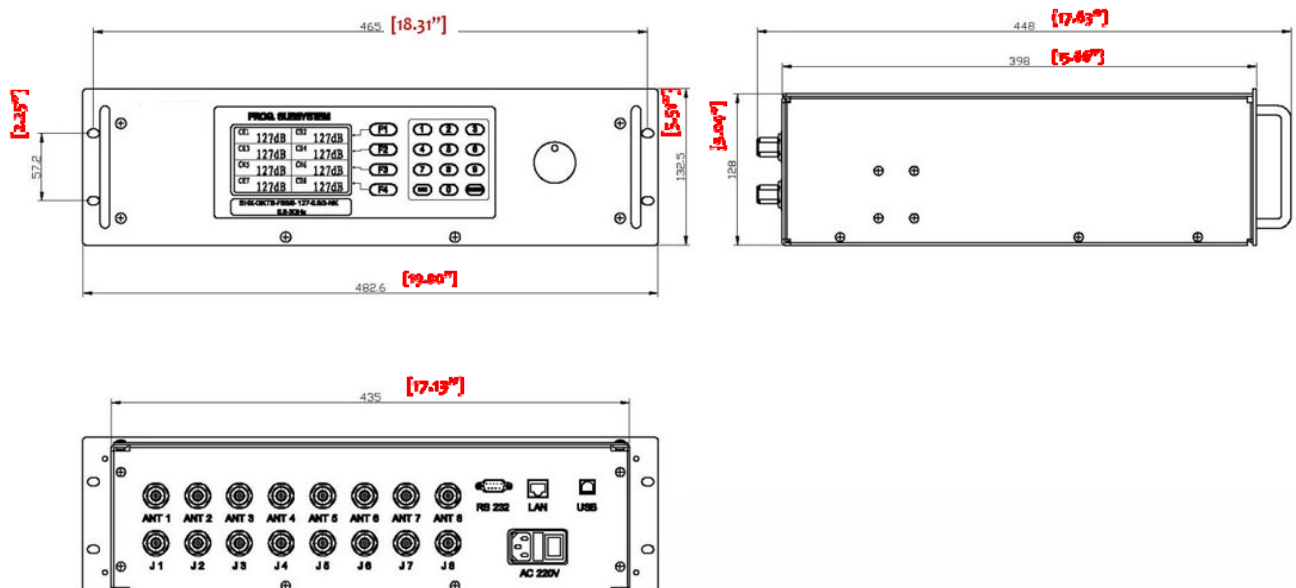
Front panel



Back panel



5. Physical Dimensions (units = mm / inch)

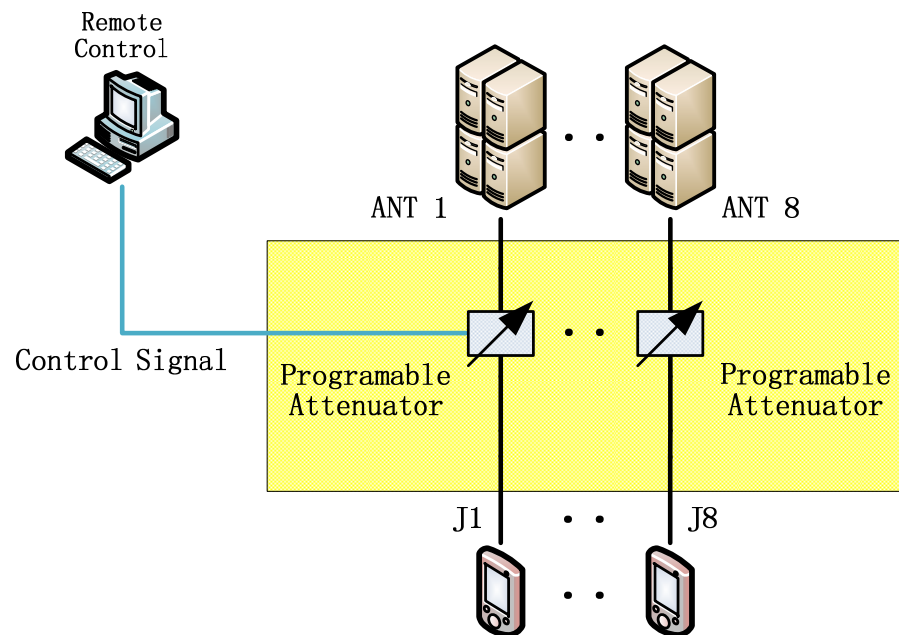




RF-LAMBDA

The power beyond expectations

SIGNAL DIAGRAM





RF-LAMBDA

The power beyond expectations

SPECIFICATIONS

Frequency Range:	0.8–3 GHz
Impedance:	50 Ohms
Attenuation Range:	0–110 dB in 1 dB steps
VSWR:	1.5:1 maximum 1.3:1 typical
Attenuation Accuracy:	±0.5 dB (<10 dB) ±1.0 dB (10–31 dB) ±1.5 dB (32–63 dB) ±2.5% dB (64–110 dB)
Insertion Loss:	16 dB maximum
RF Input Power:	+30 dBm average
Switching Speed:	2 us typical
AC Supply:	100–240 VAC @ 47–63 Hz
Manual Control:	LCD display, keypad and rotary knob control
Remote Control:	Ethernet (RJ45), RS-232, USB
Remote Command Format:	VBScript
RF Connector:	N female
Operating Temperature:	0° C to +60° C
Physical Size:	482.6 × 448 × 132.5 mm
Weight:	8.6 Kg



RF-LAMBDA

The power beyond expectations

LOCAL CONTROL

1. Power On

When the power comes on, the following boot screen displays.



Figure 1: Boot Screen

After a few seconds you will see the IP address setting screen .

Network	
Done	
Skip	

Network Settings	
IP address	192.168. 1.224
netmask	255.255.255. 0
gateway	192.168. 1. 1



2. IP Address Setting

To modify the IP address, press the F1 key on the numeric keypad to open the address-setting program (Figure 2). If you plan to use the default IP address, press F2 ship to " Remote / Local Setting" screen (Figure 3)

For example: If you want to modify the IP address from 192.168.1.112 to 192.168.1.224, rotate the knob to position 112, and notice that the field is now highlighted in blue. Type "224". Use the ESC key to cancel mistakes. After you finish, press F1 to save the setting. The remote/local setting screen will open.

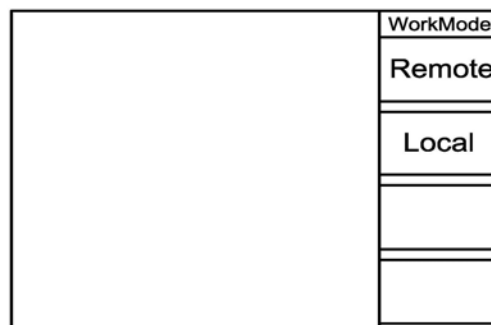


Figure 3: Remote / Local Setting

3. Remote / Local Setting

To set the unit in remote mode, press F1; for local mode, press F2. After you make your selection, the main screen will open in the selected mode (local mode has black type, remote mode has a blue type). See Figure 4. In the main screen, press F1 to toggle between local and remote modes. In the local mode (only), press F2 to advance to the channel-setting screen, and F3 for the IP address-setting screen. In the remote mode, only the F1 key is functional.



CH1 110dB	CH5 110dB
CH2 110dB	CH6 110dB
CH3 110dB	CH7 110dB
CH4 110dB	CH8 110dB

Figure 4: Main Screen

4. Single-channel Attenuation Setting

As just mentioned, pressing F2 while in local mode on the main screen advances the system to the channel-setting screen (Figure 5). To make a single channel selection, press F1. Rotate the knob to select a channel, indicated by an asterisk (*) See Figure 6. Press ENTER to return the main screen, and the color of active channel will change from black to blue.

There are two ways to set the attenuation value. One way is through the keyboard. For example, to set 45 dB, enter “45”, then press ENTER to set the active channel attenuation (Figure 7). If you make a mistake, press ESC to undo the last entry. The second method is using the knob. The attenuation in the active channel will increase by rotating the knob clockwise, and decrease by rotating it counterclockwise. Set the attenuation by pressing the knob slightly.



CH1 110dB	CH5	Channel Sel
		single > channels
CH2 110dB	CH6	Multi- > channels
CH3 110dB	CH7	All channels
CH4 110dB	CH8	Quit

Figure 5: Channel setting

CH1 110dB	CH5	* CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8
CH2 110dB	CH6	
CH3 110dB	CH7	
CH4 110dB	CH8	

Figure 6: Single-Channel Setting



CH1 110dB	CH5 110dB
CH2 110dB	CH6 110dB
CH3 110dB	CH7 110dB
CH4 110dB	CH8 110dB

45dB

Figure 7: Attenuation Setting

5. Multiple-channel Attenuation Setting

With the main screen in local mode, press F2 to advance to the channel-setting screen. To make a multiple-channel selection from the channel-setting screen, press F2 (Figure 8). As for a single-channel selection, turn the knob to align the asterisk with an intended channel, and then press the knob slightly to select the channel. (Pressing the knob twice will cause the symbol to disappear, meaning no channel is selected.) In the same way, select the rest of the channels for which you intend to adjust the attenuation, and press ENTER to confirm your multiple selection. The display returns to the main screen, with the selected channels shown in blue.

As with the single-channel attenuation adjustment, there are two ways to set the attenuation value: through the keyboard, and by using the knob. Set the attenuation by pressing the knob slightly.



CH1 110dB	CH5	* CH1 CH2 * CH3 CH4 CH5 CH6 * CH7 CH8
CH2 110dB	CH6	
CH3 110dB	CH7	
CH4 110dB	CH8	

Figure 8: Multi-channel Setting

6. All-Channel Attenuation Setting

With the main screen in local mode, press F2 to advance to the channel-setting screen. To select all channels from the channel-setting screen, press F3 (Figure 9). Return to the main screen, and notice that all channels are displayed in blue (Figure 9), indicating their status as available for adjustment. As with the single- and multi-channel attenuation adjustment, there are two ways to set the attenuation value: through the keyboard, and by using the knob. Set the attenuation by pressing the knob slightly.



CH1 110dB	CH5 110dB
CH2 110dB	CH6 110dB
CH3 110dB	CH7 110dB
CH4 110dB	CH8 110dB

Figure 9: All-Channel Setting

7. IP Address Change

With the main screen in local mode, you can verify the current IP address, and change the IP address by pressing F3 (Figure 10). For further instruction, please see Section 2: IP Address Setting.

CH1 110dB	CH5	Network
		Done
Network Settings		Skip
IP address 192.168. 1.224		
netmask 255.255.255. 0		
gateway 192.168. 1. 1		
CH4 110dB	CH8	

Figure 10: IP Address Setting



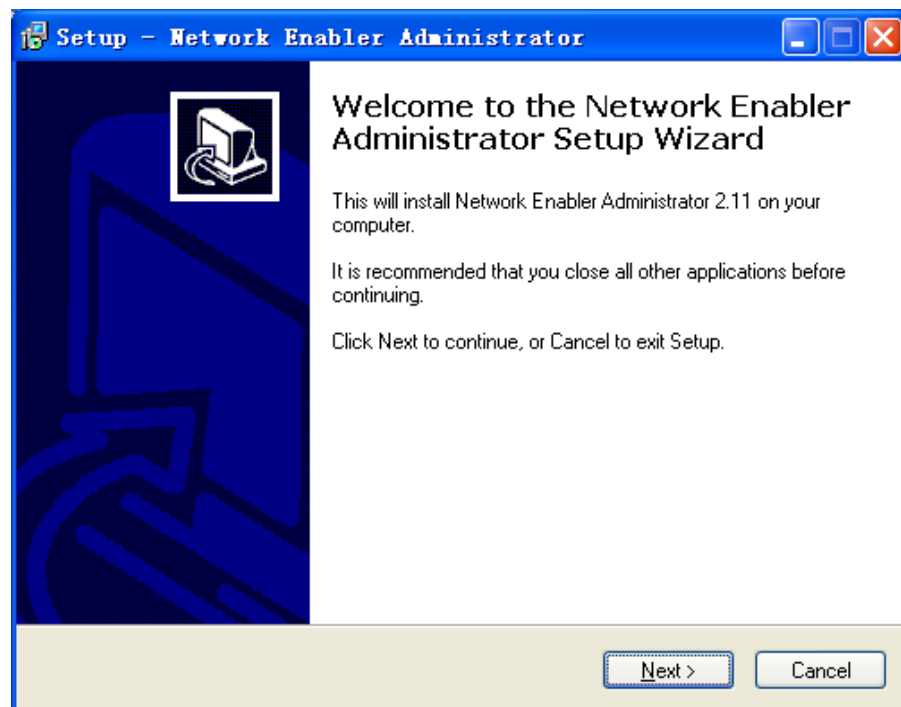
RF-LAMBDA

The power beyond expectations

REMOTE CONTROL

1. Port Configuration Software Installation

Begin by installing the serial port server driver. Open the NE-4110S folder, and click “neadm_setup_Ver2.11_Build_07082213.exe” to start the installation.

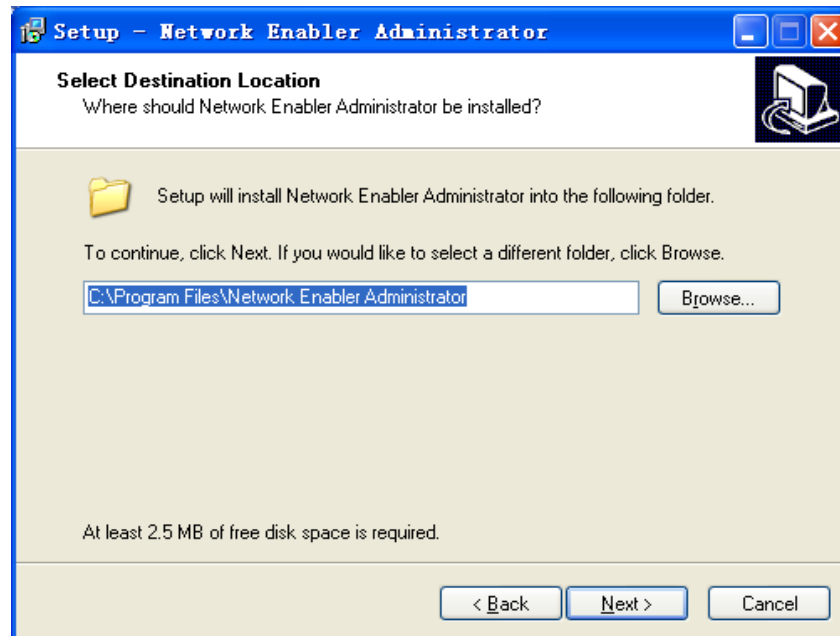


Click the “Next” button. The following window opens:

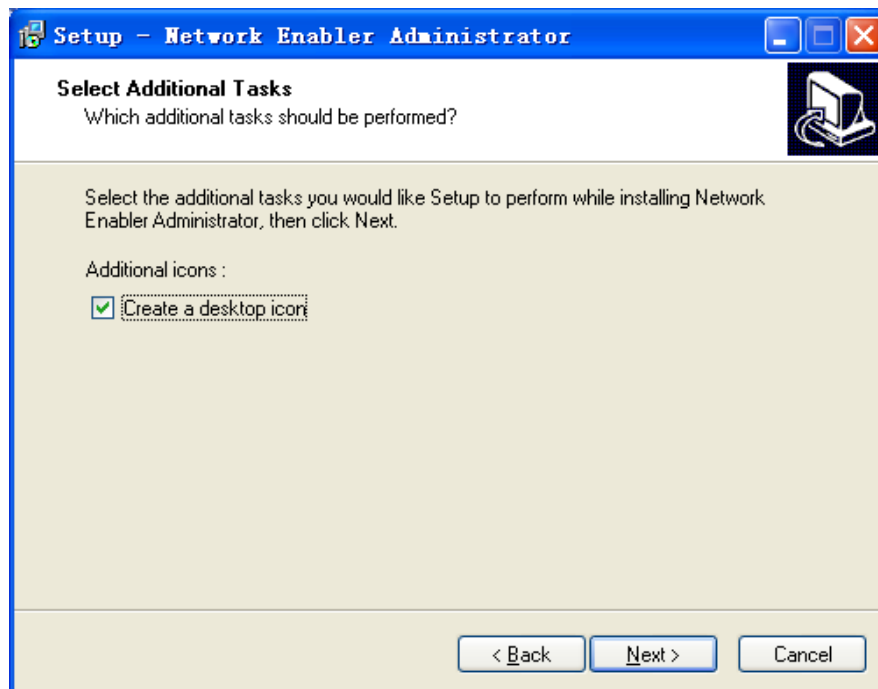


RF-LAMBDA

The power beyond expectations



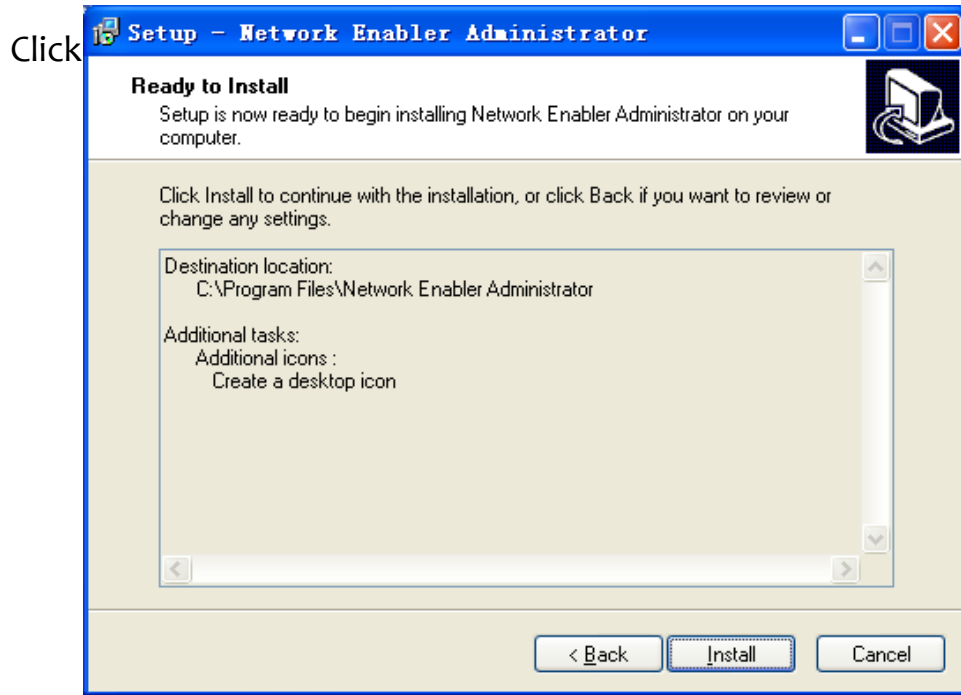
Click the “Next” button. The following window opens:



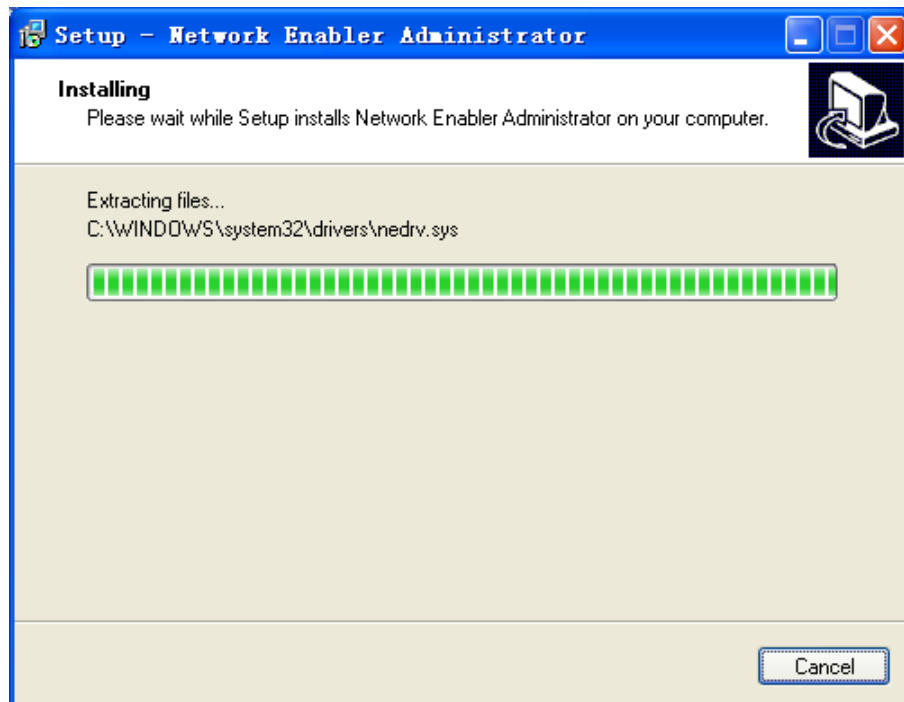


RF-LAMBDA

The power beyond expectations



Click “Install” to open the installation window.

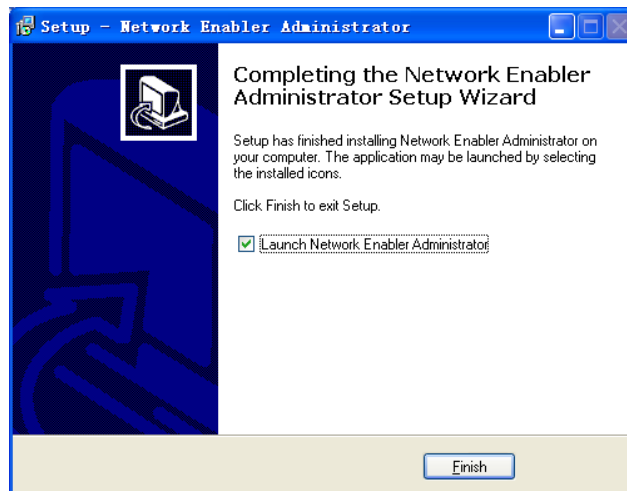




RF-LAMBDA

The power beyond expectations

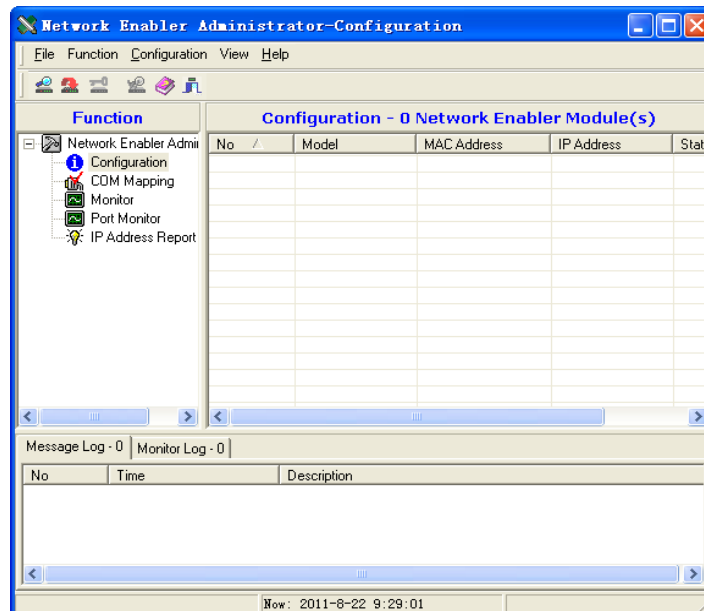
After the installation is complete, the following window opens.



Click “Finish” to finalize the installation.

2. Port Configuration Software Setting

Open “Network Enabler Administrator.”

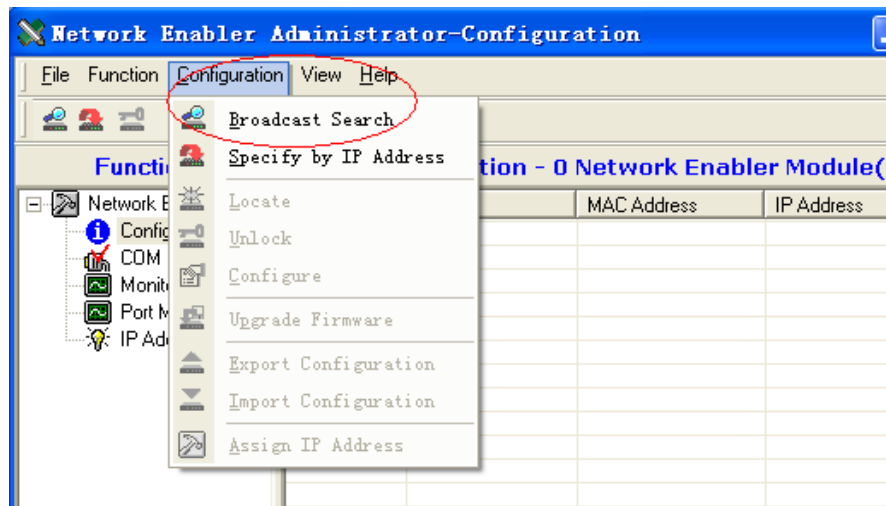




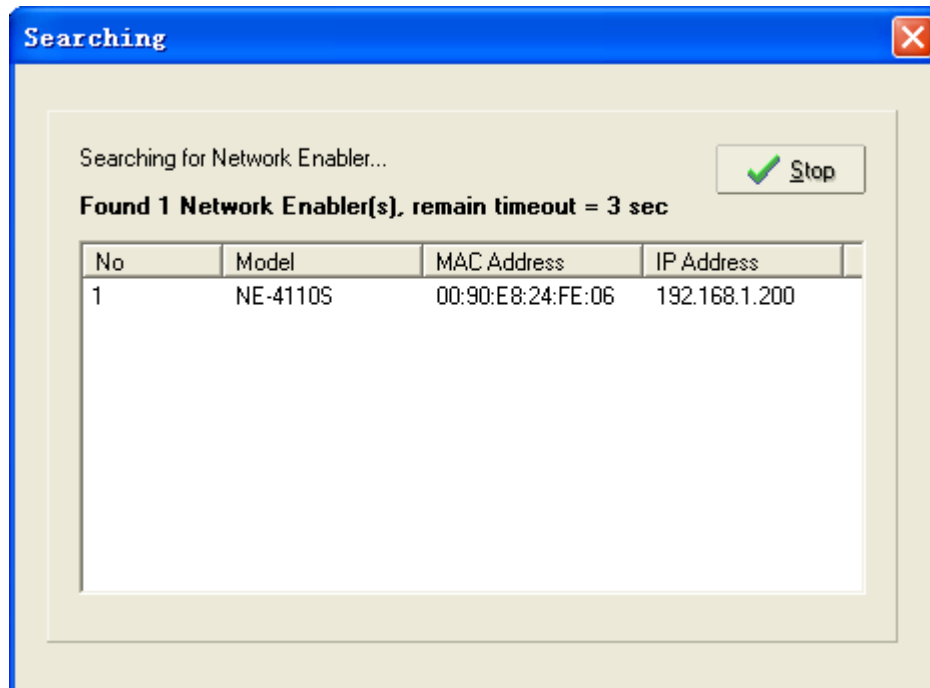
RF-LAMBDA

The power beyond expectations

To modify the IP address (with the unit connected to the PC via parallel cable), begin by opening the Configuration menu and selecting Broadcast Search.



The system will search for all available subsystems, and display a search screen, as seen immediately below.

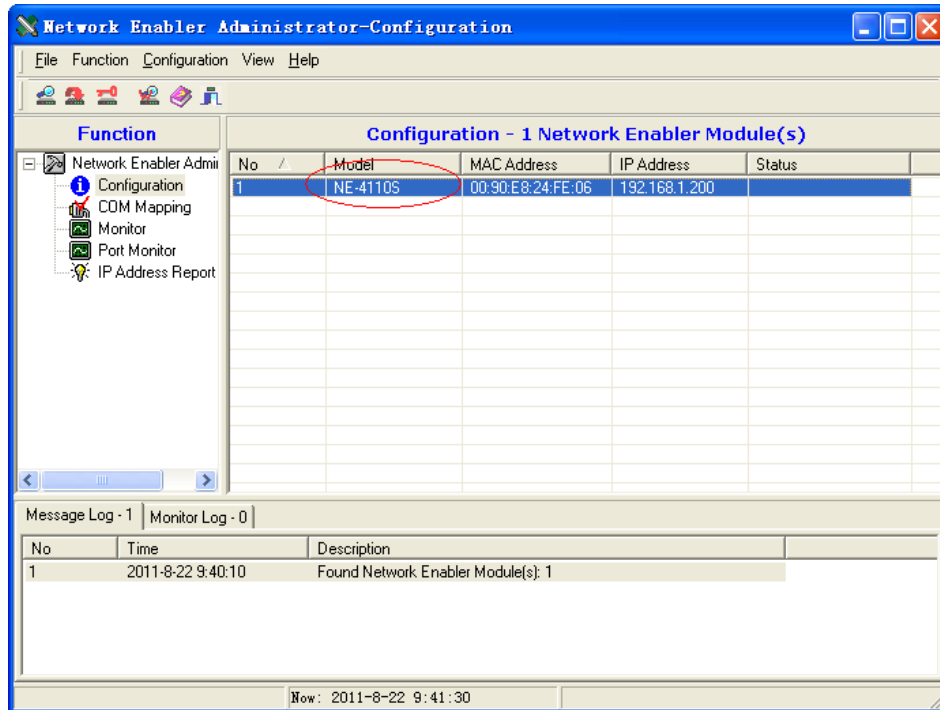




RF-LAMBDA

The power beyond expectations

Double-click on the system whose IP address you want to modify (NE-4110S, in the illustrated example) to open its IP Settings window.



In the Configuration window, select the Network tab, check the Modify check box in the IP Address area, and enter the desired IP address. Follow the same procedure to modify the Netmask and/or Gateway addresses.



RF-LAMBDA

The power beyond expectations

Configuration

Information
Model: NE-4110S
MAC Address: 00:90:E8:24:FE:06
Serial Number: 6803
Firmware Ver.: Ver 4.1
BIOS Ver.: Ver 2.2
Status: Data Mode

Auto Warning | IP Address Report | Password | Digital IO | Serial CMD
Basic | **Network** | Advanced Network | Serial | Operating Mode | Accessible IPs

☒ Modify
IP Address: 192.168.1.200
☐ Modify
Netmask: 255.255.255.0
Gateway: 192.168.1.1
IP Configuration: Static
DNS Server 1:
DNS Server 2:
☐ Modify
☒ Enable SNMP
Community Name: public
Location:
Contact:
Click the "Modify" check box to modify configuration

To confirm your selections, click OK.

Information

Configuration is applied ok.



RF-LAMBDA

The power beyond expectations

Open Internet Explorer, and enter the unit's IP address.

http://192.168.1.200/

Main Menu

- Overview
- Basic Settings
- Network Settings
- Serial Settings**
 - Port 1**
- Operating Settings
- Accessible IP Settings
- Auto warning Settings
- Digital IO
- Serial Command Mode
- Change Password
- Load Factory Default
- Save/Restart

Serial Settings

Port = 01

Port Alias

Serial Parameters

Baud Rate: 115200

Data Bits: 8

Stop Bits: 1

Parity: None

Flow Control: None

FIFO: ☐ Disable ☒ Enable

Interface: RS-232 Only

☐ Apply the above settings to all serial ports

Submit

From the Main Menu, open the Serial Settings folder, adjust the parameters as necessary, and click on Submit to confirm your selections.



http://192.168.1.200/

Main Menu

- Overview
- Basic Settings
- Network Settings
- Serial Settings
 - Port 1
- Operating Settings**
 - Port 1
- Accessible IP Settings
- Auto warning Settings
- Digital IO
- Serial Command Mode
- Change Password
- Load Factory Default
- Save/Restart

Operating Settings

Port = 01

Operation mode: TCP Server Mode

TCP alive check time: 7 (0 - 99 min)

Inactivity time: 0 (0 - 65535 ms)

Max connection: 4 (1 - 4)

Data Packing

Delimiter 1: d (Hex) ☒ Enable

Delimiter 2: a (Hex) ☒ Enable

Force transmit: 0 (0 - 65535 ms)

TCP Server Mode

Local TCP port: 4001

☐ Apply the above settings to all serial ports

Submit

From the Main Menu, open the Operating Settings folder, adjust the parameters as necessary, click on Submit to confirm your selections, and close IE.

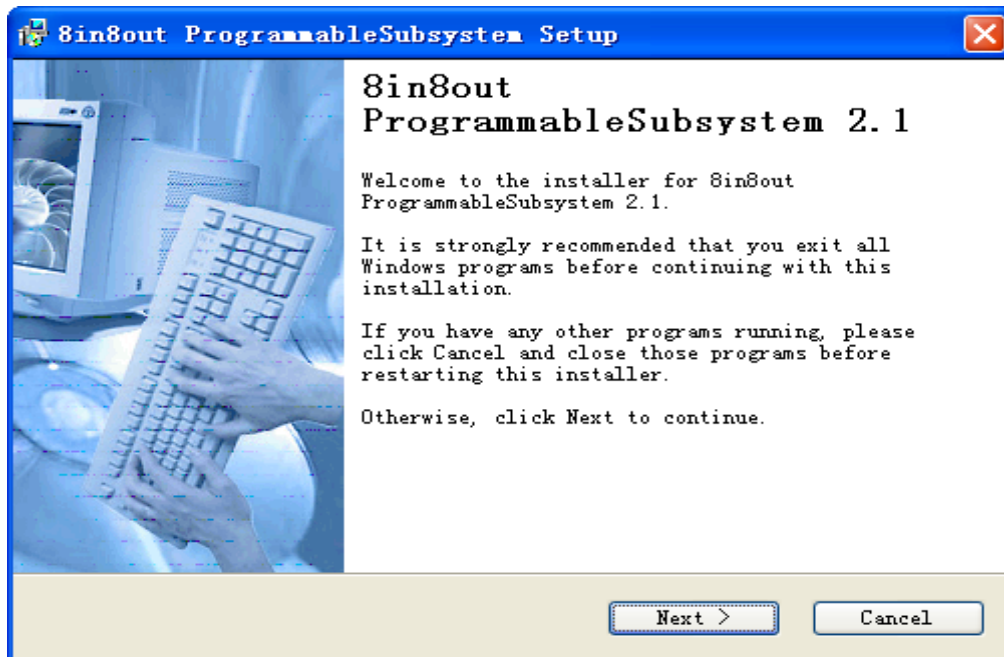
3. Operating Software Installation

Open the file, “8in8out Install,” and click on “setup.exe” to begin the installation.

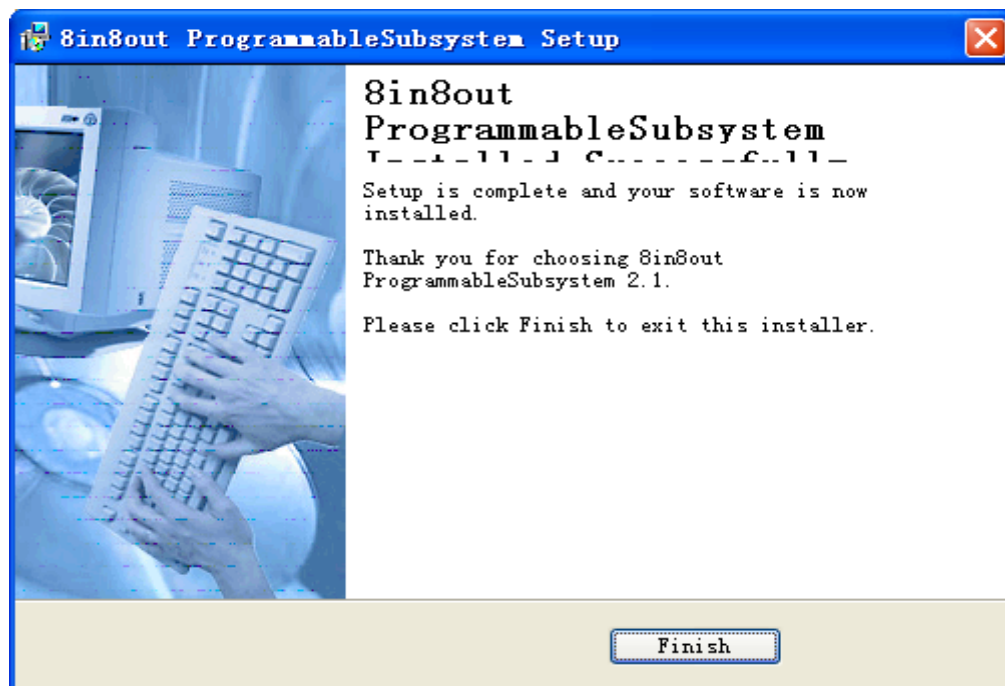


RF-LAMBDA

The power beyond expectations



Read the text on the screen, and click on Next to advance to the next screen.
Do not restart the computer.





RF-LAMBDA

The power beyond expectations

To finalize the installation, click on Finish.

4. Using the Software

Open the application: Access Control Interface.

Click on the icon, “8in8outProgrammableSubsystem.exe”, or choose Start
→ All Programs → 8in8out ProgrammableSubsystem.exe.

Because of the test subsystem’s access to the LAN, the network computer can access this subsystem.

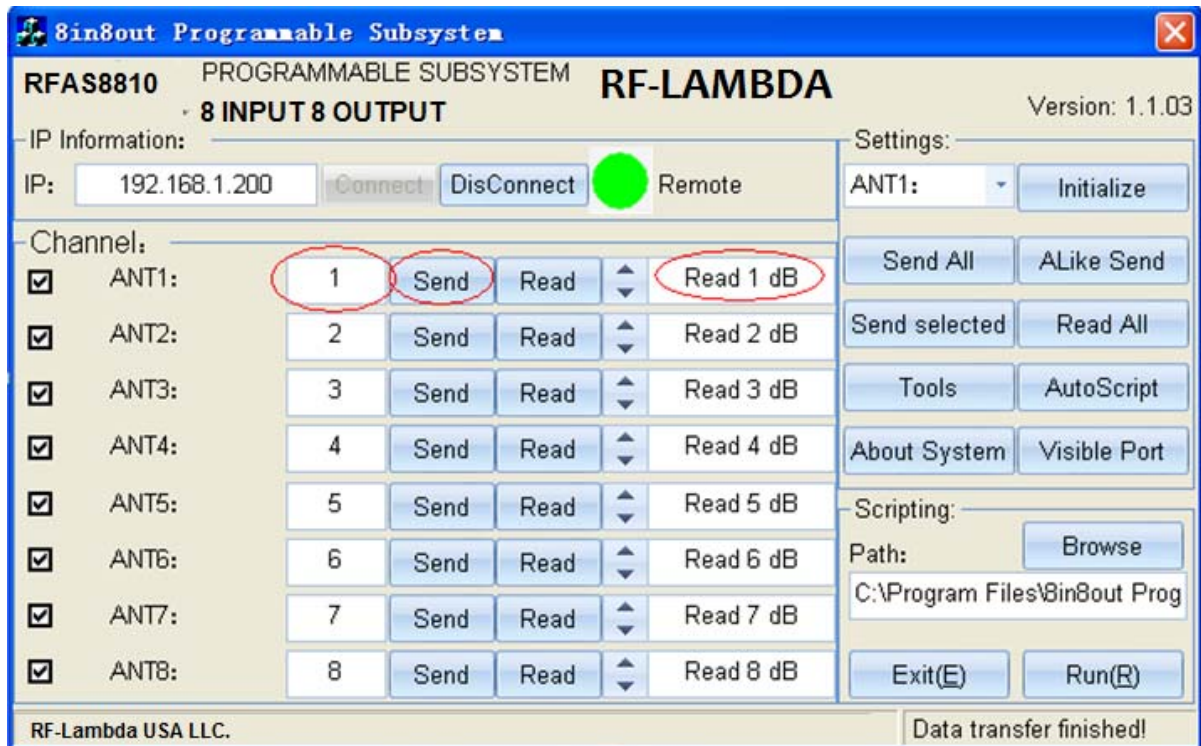
Run “8 in 8 out Programmable Subsystem.exe” by following the prompts provided in the windows that open.

When the subsystem window opens, enter “192.168.1.200” in the IP Address text box, and then click on Connect.



RF-LAMBDA

The power beyond expectations



Clicking on “Disconnect” will disconnect the communication subsystem.

Click either  or  to toggle between remote and local.



RF-LAMBDA

The power beyond expectations

Channel main interface set-up and use instructions:

Set single-channel attenuation values:

In the text box next to each channel (ANT1, ANT2, ANT3, etc.), enter the intended channel attenuation value, and click Send to confirm your selection.

Channel:	Value	Send	Read
<input checked="" type="checkbox"/> ANT1:	1	Send	Read 1 dB
<input checked="" type="checkbox"/> ANT2:	2	Send	Read 2 dB
<input checked="" type="checkbox"/> ANT3:	3	Send	Read 3 dB
<input checked="" type="checkbox"/> ANT4:	4	Send	Read 4 dB
<input checked="" type="checkbox"/> ANT5:	5	Send	Read 5 dB
<input checked="" type="checkbox"/> ANT6:	6	Send	Read 6 dB
<input checked="" type="checkbox"/> ANT7:	7	Send	Read 7 dB
<input checked="" type="checkbox"/> ANT8:	8	Send	Read 8 dB

Each channel's current attenuation value is displayed in the Read column (Read 1 dB, Read 2 dB, etc.). Press Send to confirm your selection. The text will be cleared before the data.



RF-LAMBDA

The power beyond expectations

Multi-channel Attenuation Setting:

Begin by selecting the channels you intend to set. Do this by checking the box to the left of the channel label. Then enter the intended attenuation(s).

Confirm your selection by clicking Send Selected.

The screenshot shows the '8in8out Programmable Subsystem' window by RF-Lambda. The title bar includes the product name and a close button. The main window has a blue header with 'RFAS8810 PROGRAMMABLE SUBSYSTEM 8 INPUT 8 OUTPUT' and 'RF-LAMBDA' on the right, along with 'Version: 1.1.03'. Below the header, there's an 'IP Information' section with an IP address of '192.168.1.200', 'Connect' and 'DisConnect' buttons, and a green 'Remote' indicator. To the right is a 'Settings' section with 'ANT1:' dropdown, 'Initialize', 'Send All', 'ALike Send', 'Send selected' (circled in red), 'Read All', 'Tools', 'AutoScript', 'About System', and 'Visible Port' buttons. The main area is a 'Channel' table with 8 rows (ANT1 to ANT8). The first four rows (ANT1-4) have their selection checkboxes checked and circled in red. The attenuation values for these channels are 11, 12, 13, and 14 dB, which are also circled in red. The last four rows (ANT5-8) have unchecked checkboxes and attenuation values of 5, 6, 7, and 8 dB. Each row has 'Send' and 'Read' buttons. At the bottom right, there's a 'Scripting' section with a 'Path:' label, a 'Browse' button, and the path 'C:\Program Files\8in8out Prog'. At the very bottom, there are 'Exit(E)' and 'Run(R)' buttons, and a status bar showing 'Data transfer finished!'.

Channel:	Selection	Label	Value	Action	Result
ANT1:	<input checked="" type="checkbox"/>		11	Send	Send 11 dB
ANT2:	<input checked="" type="checkbox"/>		12	Send	Send 12 dB
ANT3:	<input checked="" type="checkbox"/>		13	Send	Send 13 dB
ANT4:	<input checked="" type="checkbox"/>		14	Send	Send 14 dB
ANT5:	<input type="checkbox"/>			Send	Send 5 dB
ANT6:	<input type="checkbox"/>			Send	Send 6 dB
ANT7:	<input type="checkbox"/>			Send	Send 7 dB
ANT8:	<input type="checkbox"/>			Send	Send 8 dB

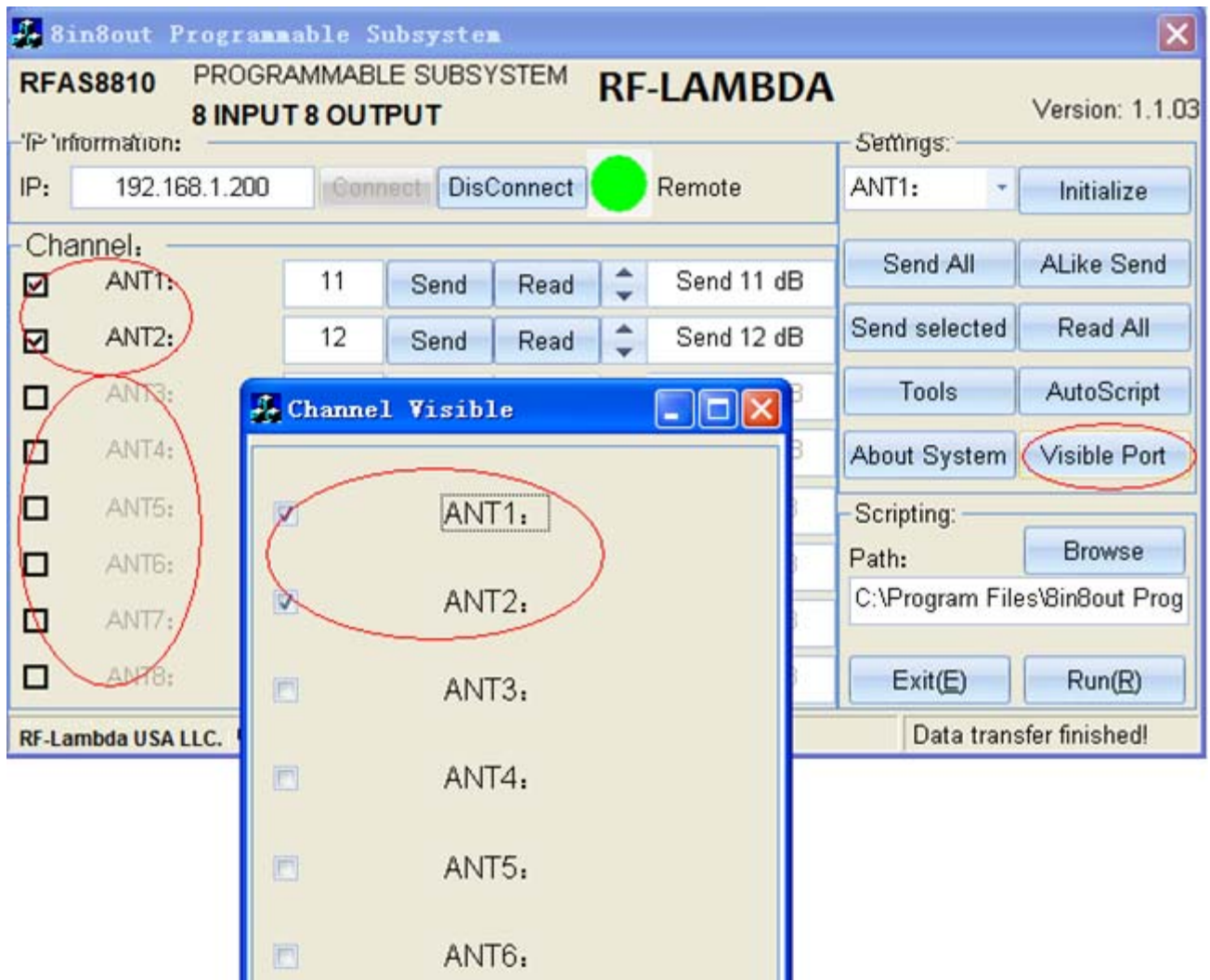


RF-LAMBDA

The power beyond expectations

Road through operational settings:

Click on Visible Port, and select the interface to operate by checking the box next to the interface's label. Click on Save to save, and Exit(E) to confirm your selection.

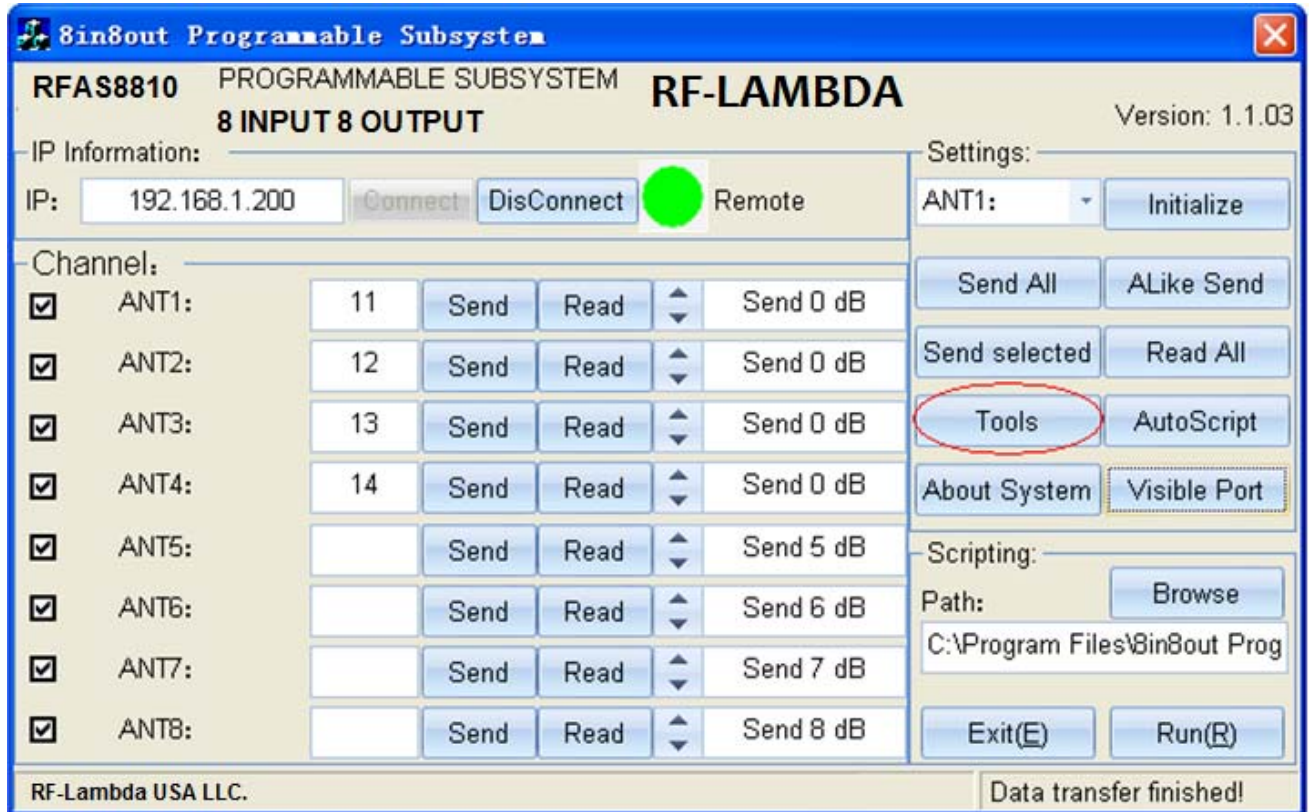




RF-LAMBDA

The power beyond expectations

To customize the name of a channel, begin by clicking on Tools.





RF-LAMBDA

The power beyond expectations

The Frm_Tools window opens. Click on Profile.

The Frm_Profile window opens. Use the text box next to the channel label to modify its name. Confirm your change by clicking on Save(S).



RF-LAMBDA

The power beyond expectations

The next time you start the program, the name will automatically be saved.

To set an attenuation value for all eight channels simultaneously, begin at the 8in8out Programmable Subsystem window. Click on Tools. As with the channel name-customization procedure, the Frm_Tools window opens. Select your intended attenuation value from the Attenuation(Default) menu, and click on Save to confirm your selection and exit.

Frm_Tools

SystemSet

Attenuation(Default) 10

Initialized Value 5

Increment/Decrerr 1

Profile

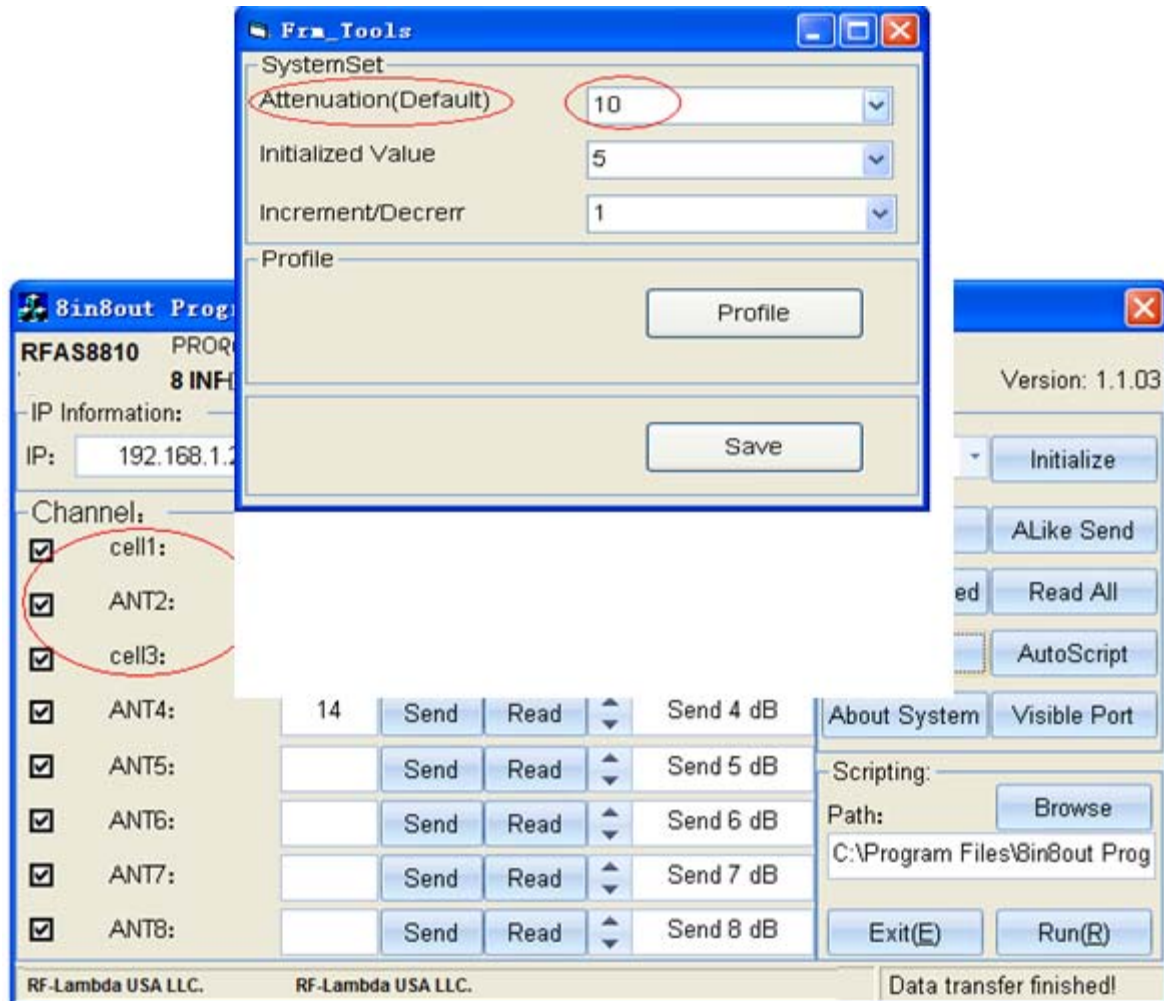
Profile

Save



RF-LAMBDA

The power beyond expectations



To set an initialized value for the attenuation, open the Frm_Tools window as in the two previous procedures. Choose a value from the Initialized Value menu, and click on Save to confirm your selection and exit.



RF-LAMBDA

The power beyond expectations

Frm_Tools

SystemSet

Attenuation(Default) 10

Initialized Value 5

Increment/Decrerr 1

Profile

Profile

Save

Save and return to the main interface, when in the "Settings" drop-down list, select a channel, click on "initialize" later. In addition to the selected channel 5 (set value), the other channels are 110 (maximum attenuation).

8in8out Programmable Subsystem

RFAS8810 PROGRAMMABLE SUBSYSTEM 8 INPUT 8 OUTPUT RF-LAMBDA Version: 1.1.03

IP Information: IP: 192.168.1.200 Connect DisConnect Remote

Settings: cell3: Initialize

Channel:

Channel	Send	Read	Attenuation
<input checked="" type="checkbox"/> cell1:	Send	Read	Send 110 dB
<input checked="" type="checkbox"/> ANT2:	Send	Read	Send 110 dB
<input checked="" type="checkbox"/> cell3:	Send	Read	Send 5 dB
<input checked="" type="checkbox"/> ANT4:	Send	Read	Send 110 dB
<input checked="" type="checkbox"/> ANT5:	Send	Read	Send 110 dB
<input checked="" type="checkbox"/> ANT6:	Send	Read	Send 110 dB
<input checked="" type="checkbox"/> ANT7:	Send	Read	Send 110 dB
<input checked="" type="checkbox"/> ANT8:	Send	Read	Send 110 dB

Send All ALike Send

Send selected Read All

Tools AutoScript

About System Visible Port

Scripting: Path: C:\Program Files\8in8out Prog Browse

Exit(E) Run(R)

RF-Lambda USA LLC. Data transfer finished!



RF-LAMBDA

The power beyond expectations

Click "AutoScript" run into the automation interface.

		Start	Stop	Step
<input checked="" type="checkbox"/>	cell1: 19 dB	1	60	1
<input checked="" type="checkbox"/>	ANT2: 19 dB	1	60	1
<input checked="" type="checkbox"/>	cell3: 18 dB	60	1	1
<input checked="" type="checkbox"/>	ANT4: 18 dB	60	1	1
<input type="checkbox"/>	ANT5: 0 dB	0	110	1
<input type="checkbox"/>	ANT6: 0 dB	0	110	1
<input type="checkbox"/>	ANT7: 0 dB	0	110	1
<input type="checkbox"/>	ANT8: 0 dB	0	110	1

Set the appropriate parameters, the first point of "Application", and then point "start" to run.



RF-LAMBDA

The power beyond expectations

		Start	Stop	Step
<input checked="" type="checkbox"/>	cell1: 18 dB	1	60	1
<input checked="" type="checkbox"/>	ANT2: 18 dB	1	60	1
<input checked="" type="checkbox"/>	cell3: 42 dB	60	1	1
<input checked="" type="checkbox"/>	ANT4: 42 dB	60	1	1
<input type="checkbox"/>	ANT5: 0 dB	0	110	1
<input type="checkbox"/>	ANT6: 0 dB	0	110	1
<input type="checkbox"/>	ANT7: 0 dB	0	110	1
<input type="checkbox"/>	ANT8: 0 dB	0	110	1

Point "Pause" pause, point "Quit" to exit.

Other buttons:

"Read All" to read the current attenuation value of all channels.

"About System" system-related information.

"Exit" to exit the program.



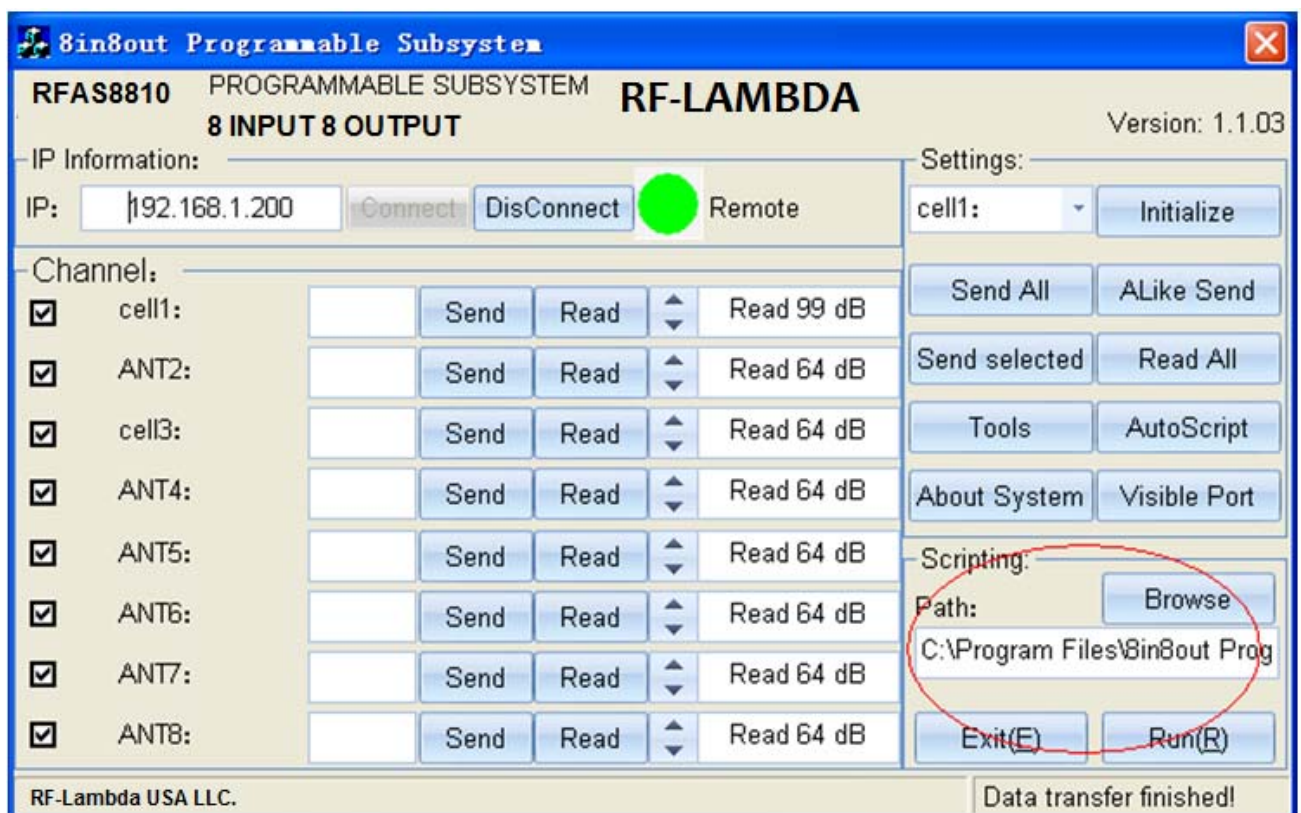
RF-LAMBDA

The power beyond expectations

CUSTOM SCRIPT SETTINGS

Run automation script:

From the primary window, select Browse, and then navigate to the location of the VBScript. Begin the script by clicking on Run(R).



Communication protocol can be written by python scripts custom
Self Python script.

Open the folder "python Demo", "Attenuator Control.py" This
program has been tested.



RF-LAMBDA

The power beyond expectations

```
Python Shell
File Edit Debug Options Windows Help
Python 2.5.1 (r251:54863, Apr 18 2007, 08:51:08) [MSC v.1310 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.

*****
Personal firewall software may warn about the connection IDLE
makes to its subprocess using this computer's internal loopback
interface. This connection is not visible on any external
interface and no data is sent to or received from the Internet.
*****

IDLE 1.2.1      ==== No Subprocess ====
>>>
Please input 'com' 'channel' 'min' 'max' 'step' 'delayTime':

com8 1 1 10 1 1
com8 open ok
Attenuation set value 1 dB Ok
Attenuation set value 2 dB Ok
Attenuation set value 3 dB Ok
Attenuation set value 4 dB Ok
Attenuation set value 5 dB Ok
Attenuation set value 6 dB Ok
Attenuation set value 7 dB Ok
Attenuation set value 8 dB Ok
Attenuation set value 9 dB Ok
Attenuation set value 10 dB Ok
>>> |
```

ACCESSORIES

- | | |
|---|------|
| 1. 110V/ 220V power cable | 1pcs |
| 2. CD (driver, control software, user manual) | 1pcs |
| 3. User manual | 1pcs |
| 4. Product certification | 1pcs |



Ethernet and RS-232 Command Information

<CR> = carriage return

<LF> = line feed

Command must be terminated by carriage return and line feed.

- **Identification**

This command echoes back information and help information about the test system.

Syntax: HX<CR><LF>

Example: HX<CR><LF>

System will return:

```
>>RF-Lambda Firmware Rev A!  
>>SA:Set attenuator value!  
>>RA:Get attenuator value!  
>>SS:Set switch value!  
>>RS:Get switch value!  
>>RI:Get the input port connected to any output port!  
>> It is used in a power divider system!  
>>RO:Get the output port connected to any input port!  
>> It is used in a power Combiner system!  
>>LO:Lock keyboard of the system!,  
>>LU:Unlock keyboard of the system!,  
>>RT:Restart system!,  
>>Enter "HX" and command without space to get more details!
```

Notes: Command is not case sensitive.

- **Set Attenuator**

The set attenuator command is used to set the attenuation level of a specific attenuator.

Syntax: SAx y<CR><LF>

x = attenuator number

y = attenuation level

Example:

SA11 20<CR><LF>	Sets attenuation of attenuator #11 to 20dB.
System will return:	>>A11:20dB;<CR><LF>
SA1 10;SA3 30<CR><LF>	Sets attenuation of attenuator #1 to 10dB,#3 to 10dB.
System will return:	>>A1:10dB;A3:30dB;<CR><LF>
SA1-6 20<CR><LF>	Sets attenuation of attenuator from #1 to #6 to 127dB.
System will return:	>>A1:10dB;A2:20dB ;A3:10dB;A4:20dB; <CR><LF> >>A1:10dB;A3:20dB;<CR><LF>



Ethernet and RS-232 Command Information

Read Attenuator

The read attenuator command returns the attenuation setting for a specific attenuator.

Syntax: RAx<CR><LF>

x = attenuator number

Example:

RA11<CR> <LF>	Reads attenuator #11 setting.
System will return	>>A11:20dB;<CR><LF>
RA1;SA3<CR><LF>	Reads attenuation of attenuator #1,#3 setting.
System will return	>>A1:10dB;A3:30dB;<CR><LF>
RA1-6<CR><LF>	Reads attenuator from #1 to # 6 setting.
System will return	>>A1:10dB;A2:20dB ;A3:10dB;A4:20dB; <CR><LF>
	>>A1:10dB;A3:20dB;<CR><LF>

- **Set Switch**

The set switch command is used to set a switch to a specific port number.

Syntax: SSx y<CR><LF>

x = switch number

y = port number

Example:

SS11 8<CR><LF>	Sets switch #11 to port 8.
System will return:	>>S11:8;<CR><LF>
SS1 4;SS3 8<CR><LF>	Sets switch #1 to port 4, #3 to port 8.
System will return:	>>S1:4;S3:8;<CR><LF>
SA1-6 1<CR><LF>	Sets switch from #1 to #6 to port 1.
System will return:	>>S1:1;S2:1;S3:1;S4:1;<CR><LF>
	>>S5:1;S6:1;<CR><LF>

- **Read Switch**

The read switch command returns the port setting for a specific switch.

Syntax: RSx<CR><LF>

x = switch number

Example: RS11<CR> <LF>	Read switch #11 setting.
System will return	>>S11:8;<CR><LF>
RS1;SA3<CR><LF>	Read switch #1,#3 setting.
System will return	>>S1:4;S3:8;<CR><LF>
RS1-6<CR><LF>	Read switch from #1 to #6 setting.
System will return	>>S1:1;S2:1;S3:1;S4:1;<CR><LF>
	>>S5:1;S6:1;<CR><LF>



RF-LAMBDA

The power beyond expectations

Ethernet and RS-232 Command Information

Read Input

Get the input port connected to any output port! It is used in a power divider system!

Syntax: RIx<CR><LF>

x = output port

Example: RI 1<CR> <LF>
System will return

Get the input port connected to output #1!
>>RI1:1,3,5,8;<CR><LF>

- **Read Output**

Get the output port connected to any input port! It is used in a power Combiner system!

Syntax: ROx<CR><LF>

x = input port

Example: RO 1<CR><LF>
System will return

Get the output port connected to input #1!
>>RO1:1,3,5,8;<CR><LF>

- **Lock keyboard**

Lock keyboard of the system!

Syntax: LO<CR><LF>

Example: LO<CR><LF>
System will return

>>Keyboard is locked!<CR><LF>

- **Lock keyboard**

Unlock keyboard of the system!

Syntax: LU<CR><LF>

Example: LU<CR><LF>
System will return

>>Keyboard is unlocked!<CR><LF>

- **Reset system**

Restart system!

Syntax: RT123ABC<CR><LF>

Example: RT123ABC<CR><LF>
System will return

>>System will restart!<CR><LF>